

ABSTRACT OF THE DISCLOSURE:

Please replace the abstract to read as follows:

B16 An enhanced cryptographic system of high security for a ciphering of a block of data bits under control of a cryptographic key and for generating a one way transformation of a block of data bits with said cryptographic system being based upon the traditional DES but utilizing a variable permutation after the S box substitution function. Said variable permutation is able to be realized in an FPGA implementing the variable permutation via a switching network such as an Omega or Bennes-Waksman network with the switching network control elements under control of the cryptographic key and with an electable mode compatible with the traditional single DES and TDEA and their various modes and with a further capability for a privacy mode within a set of holders of common cryptographic key via a sub key selection mask. A method and process for efficient interruption and resumption of the cryptographic operation are also described.